

# **ABSTRACT**

A method and apparatus for noise cancellation in a multi-channel communication system is disclosed. In one embodiment this system is configured to cancel FEXT on a  
5 victim channel utilizing the signals received on the other channels. The processing benefits gained by a receiver's other filters, such as for example, the FFE and DFE filters, is utilized when generating a FEXT cancellation signal. As a result, the complexity of the apparatus that generates the FEXT cancellation signal may be made less complex since part of the processing burden is performed by other filter apparatus. In one  
10 configuration pre-code FEXT cancellation occurs in that a pre-code FEXT filter generates one or more pre-code FEXT cancellation signals corresponding to each of the other channels. The pre-code FEXT cancellation signals are combined, prior to transmission, with the signals associated with each of the other channels, to thereby pre-cancel FEXT prior to transmission.

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